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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/677,537

10/03/2003

Tetsujiro Kondo

243480US6

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04/02/2008

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
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ALEXANDRIA, VA 22314

EXAMINER

SMITH, JEFFREY S

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

04/02/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/677,537	<b>Applicant(s)</b> KONDO ET AL.	
	<b>Examiner</b> JEFFREY S. SMITH	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,020,925 issued to Jung ("Jung") in view of U.S. Patent Number 4,754,490 issued to Swonger ("Swonger").

For claim 1, Jung discloses a device that detects position information corresponding to a feature value that is based on a value of the target pixel of which a motion vector is to be determined, the feature value representing said feature of said target pixel (column 4 lines 11-21 and 45-58), that determines a centroid of candidate pixels of the first frame which are identified with the position information (column 4 line 50), and that detects a motion vector of the target pixel from the position of the target pixel and the centroid (column 4 lines 53-58).

Swonger discloses a device where the image memory stores position information of each pixel of a frame at an address corresponding to a feature value that is based on a value of the pixel, the feature value representing a feature of the pixel (abstract, figures 1 and 3, column 1 lines 53-68, column 3 lines 17-27).

It would have been obvious to one of ordinary skill in the art at the time of invention to use the pixel position addressable by pixel feature memories of Swonger

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with motion prediction device of Jung for the benefit of easily identifying the location of pixels with a certain feature as taught by Swonger when determining a motion vector from a plurality of candidates having the feature as taught by Jung.

For claims 2 and 3, which disclose the elements of claim 1 expressed in method and computer memory forms, these claims are rejected based on Swonger and Jung for the reasons given in the rejection of claim 1, because using the apparatus of claim 1 to perform the method of claim 2 or to store a computer program which when executed by a processor performs the method of claim 2 is within the ordinary skill in the art at the time of invention.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Application No. JP11258472 by Kondo ("Kondo") published March 30, 2001 in view of U.S. Patent Number 5,576,772 issued to Kondo ("Kondo II") and U.S. Patent Number 4,754,490 issued to Swonger ("Swonger").

For claim 1, Kondo discloses a device that determines a centroid of candidate pixels of the first frame which are identified with the position information detected by the position information detected by the first detecting means (see 21 of Fig. 5), and second detecting means for detecting a motion vector of the target pixel from the position of the target pixel and the centroid (see 22 of Fig. 5, see also Figs. 6A, 6B, and 6C), along with storing means for storing position information of pixels of a first frame that is earlier in time than a second frame (see image memory storing means element 24 of Fig. 5)

and first detecting means for detecting the position information stored at an address (see Figs. 6A-6C).

Kondo II discloses a device that detects position information of a target pixel of which a motion vector is to be determined based on a feature of the target pixel (see Figs. 9A-9C).

Swonger discloses a device where the image memory stores position information of each pixel of a frame at an address corresponding to a feature value that is based on a value of the pixel, the feature value representing a feature of the pixel (abstract, figures 1 and 3, column 1 lines 53-68, column 3 lines 17-27).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the feature based memory of Swonger with the feature based motion vector device of Kondo II for the benefit of retrieving candidate pixels that have a given feature as taught by Kondo II using a memory address that corresponds to the feature as taught by Swonger. It would have been obvious to use the combination of Swonger and Kondo II with the device of Kondo for determining a motion vector from a plurality of candidate motion vectors using the centroid as taught by Kondo.

For claims 2 and 3, which disclose the elements of claim 1 expressed in method and computer memory forms, these claims are rejected based on Swonger and Jung for the reasons given in the rejection of claim 1, because using the apparatus of claim 1 to perform the method of claim 2 or to store a computer program which when executed by a processor performs the method of claim 2 is within the ordinary skill in the art at the time of invention.

***Response to Arguments***

Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY S. SMITH whose telephone number is (571)270-1235. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS

March 25, 2008

/Jingge Wu/

Supervisory Patent Examiner, Art Unit 2624